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ABSTRACT

A series of five discussions with more than 50 people involved in the national school-to-work initiative created by the School-to-Work Opportunities Act of 1994 (STWOA) resulted in the following conclusions (among others): (1) Problems with the concept include a negative attitude toward the phrase "school-to-work," the complicated nature of system building, the reality that reform takes time, limits in the structure of government support systems, and lack of mechanisms to continue the progress of the initiative; (2) Some states have made successful efforts in STWOA, infusing education reform with higher standards, providing tax credits for participating businesses, and making plans for continuing the programs after the federal law expires; (3) In other states, STWOA system-building efforts are faltering because of lack of funding, an inappropriate focus on short-term gains as opposed to sustained education reform, limited data-capturing ability, and controversy; and (4) Few resources for continued funding of STWOA exist. The group developed 10 essential principles to improve the school experience, to expand and improve work-based learning opportunities, and to build and sustain public and private partnerships. (Contains 40 references.) (KC)

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School-to-Work Principles and Strategies for Sustainability

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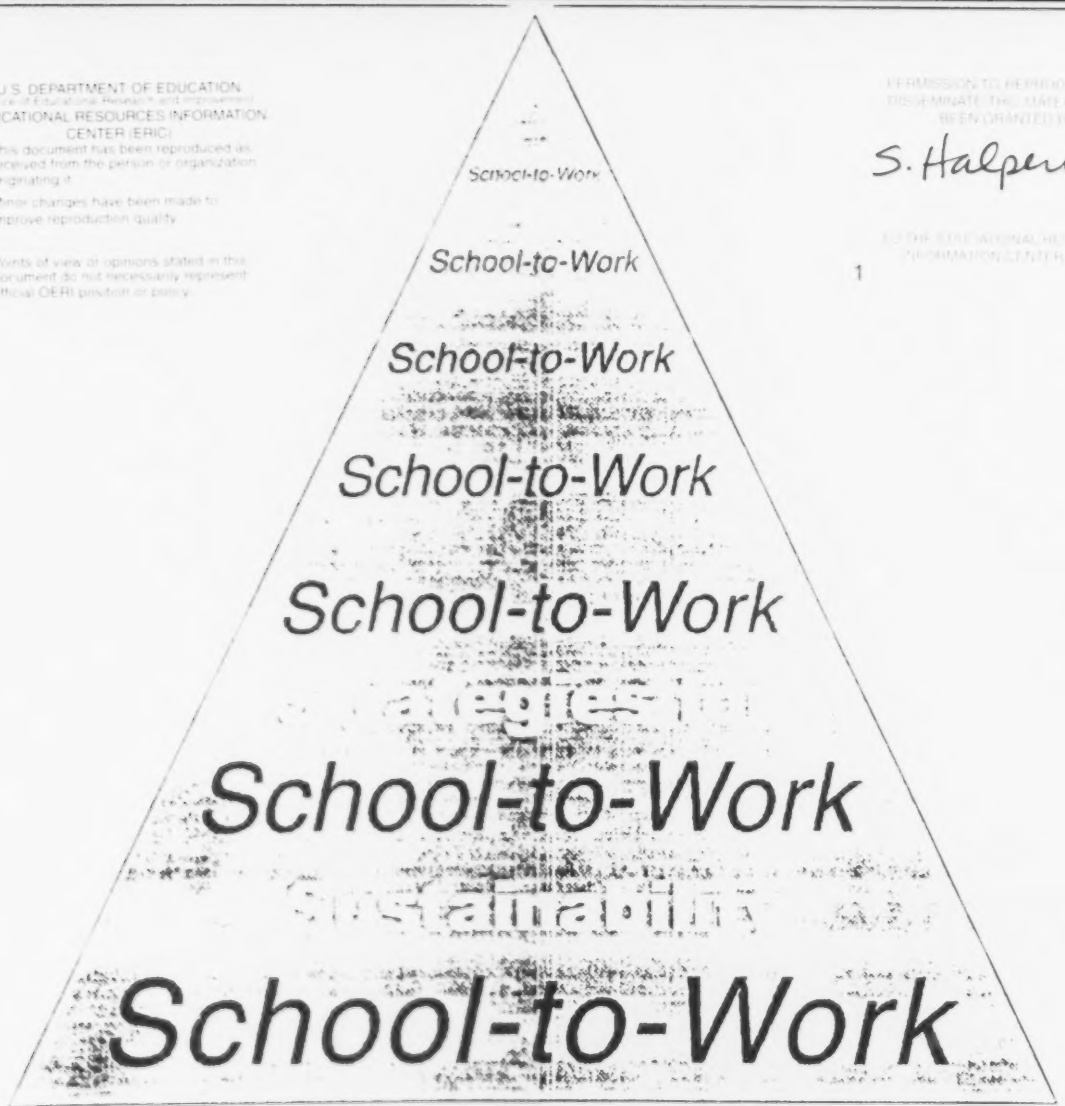

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American Youth Policy Forum and the
Center for Workforce Development (Institute for Educational Leadership)

LOOKING FORWARD:

School-to-Work Principles and Strategies for Sustainability

American Youth Policy Forum

and the

Center for Workforce Development,
Institute for
Educational Leadership

June 2000

ABOUT THE PUBLISHERS

The **American Youth Policy Forum** (AYPF) is a non-profit professional development organization based in Washington, DC. AYPF provides nonpartisan learning opportunities for individuals working on youth policy issues at the local, state and national levels. Participants in our learning activities include: government employees—Congressional staff, policymakers and Executive Branch aides; officers of professional and national associations; Washington-based state office staff; researchers and evaluators; education and public affairs media.

Our goal is to enable policymakers and their aides to be more effective in their professional duties and of greater service—to Congress, the Administration, state legislatures, governors and national organizations—in the development, enactment, and implementation of sound policies affecting our nation's young people. We believe that knowing more about youth issues—both intellectually and experientially—will help them formulate better policies and do their jobs more effectively. AYPF does not lobby or take positions on pending legislation. We work to develop better communication, greater understanding and enhanced trust among these professionals, and to create a climate that will result in constructive action. Each year AYPF conducts 35 to 45 learning events (forums, discussion groups and study tours) and develops policy reports disseminated nationally. For more information about these activities and other publications, contact our web site at www.aypf.org.

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In 1998, the American Youth Policy Forum and the Center for Workforce Development at the Institute for Educational Leadership began discussing the lessons learned from and the future of the school-to-career initiative. The two organizations focused on the School-to-Work Opportunities Act of 1994 (STWOA) and the need to maintain the momentum of this investment after the federal legislation ends on October 1, 2001. The discussion included individuals who were involved in school-to-work programs or activities at the federal, national, state and community levels and spanned secondary and postsecondary education, employer and community groups plus other vital participants, such as parents, teachers and counselors. A list of participants appears in the back cover. The group of over 50 individuals met five times between April 1998 and November 1999. The result of those discussions is this document, **Looking Forward: School-to-Work Principles and Strategies for Sustainability.**

The authors of this report thank the members of the discussion group who devoted many hours in consideration of this topic and who provided the insights underlying this document. This document and the ideas in it do not represent the positions of the organizations with which the discussion group members are affiliated.

We offer this document as a means of supporting those individuals who have been the pioneers of the school-to-work movement—the teachers and faculty, principals and deans, career counselors, community organizers, employers, researchers, parents and students—those who have worked hard to create paths of academic success for our youth. We acknowledge your groundbreaking work on which we relied for this report, and which will provide the basis for a broader discussion on using school-to-work strategies to prepare all young people for positive futures.

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EXECUTIVE SUMMARY

This report grew out of concerns about the future of the many promising initiatives, partnerships and reforms supported by the School-to-Work Opportunities Act of 1994 (STWOA) and the need to maintain the momentum of this investment after the federal legislation ends on October 1, 2001.

Unlike other federal initiatives, STWOA was not a programmatic effort, but a ***systems-building strategy*** designed to support and extend state and local education reform as well as workforce and economic development efforts. Consequently, it faced a number of implementation challenges, including overcoming:

- the problems and prejudices imbedded in the phrase "school-to-work" that caused many parents and groups to ignore its promise of preparing all young people for challenging options (including postsecondary education) upon high school graduation;
- the complicated nature of systems building requiring the commitment and coordinated actions of multiple sectors, including the schools seeking to produce competent graduates and employers seeking qualified employees;
- the reality that reforms take time;
- a limited timeframe to build a body of compelling evidence of effectiveness; and
- limitations in the structure of government to support systems that extend beyond silos of traditional interest and responsibility.

The American Youth Policy Forum and the Center for Workforce Development of the Institute for Educational Leadership sponsored a series of discussions among over 50 individuals with an interest and involvement in the national school-to-work initiative. A discussion group met five times between April 1998 and November 1999. This document grew out of those meetings.

Each member of the group came to the table with extensive and varied experiences with the school-to-work (STW) initiative. They came because of their involvement in K–12 or postsecondary education, as service providers, through the activities with membership organizations, as business partners, through networks of employers concerned about the quality of their future employee pool, from the vantage point of national or state-based organizations, or as individuals involved in policy, research or advocacy focused on preparing young people to enter the workforce. A list of individuals attending one or more of the discussions is provided on the back cover with their institutional affiliations, though most were present in their individual, not their organizational, capacity.

This group had no set agenda other than concerns:

- about the future of the national school-to-work systems building effort once the STWOA of 1994 sunsets in 2001;
- that certain elements of the school-to-work initiative have been successful and need to be preserved and extended throughout the United States; and

- that few assurances or mechanisms are in place to ensure sustained progress of the initiative.

The first meetings provided a gauge of the group's interest in maintaining the momentum put in place by the STWOA, the level of commitment on the part of local and state stakeholders and employers in sustaining the effort, and the progress made in thinking systemically about how we as a nation prepare and support young people for productive lives. The group reflected on the lessons learned since the Act was first implemented and considered the challenges ahead.

Information was shared about how school-to-work approaches have become integral to state reform agendas and key initiatives of some governors and chief state school officers. As of March 1999, almost half the states had passed laws supporting school-to-work initiatives. In these states, it is anticipated that the sunset of the federal law should have little long-term effect. These states have made connections between a successful education system and a prepared workforce. They have infused education reform with Principles of higher standards, regular assessments, integrated curricula and work-based learning. They have instituted incentives such as tax credits to businesses that are involved in school-to-work partnerships and have helped to support the development of apprenticeships and other career-development strategies to ensure that a well-prepared workforce is available to address the economic development needs of their states (Schmidt, March 1999).

In other states, however, developing and sustaining school-to-work systems is one among other more pressing priorities. In these states, system building efforts may falter because:

- not enough dollars have been provided to allow these approaches to take hold in many communities;
- there has been an inappropriate focus on short-term gains as opposed to sustained education reform;
- data attesting to the beneficial effect on students has been slow to surface;
- it has been entangled in controversies over federal involvement in local education issues; and
- some groups have assumed incorrectly that school-to-work strategies will result in greater tracking of students into low-level (non-academic) courses and young people into low-paying careers.

In spite of these concerns, many positive reports surface from communities, particularly large urban areas, that have used STW strategies successfully as a mechanism to push school reform in the high schools and as a way of stressing preparation of young people for adulthood and civic responsibility. In Philadelphia, for example, school-to-work strategies are being implemented as critical components of school reform, and the STW name will be retained after the federal support is ended. Also, since the majority of students in the Philadelphia Public Schools are from low-income families, funding streams that target low-income and disadvantaged youth, such as the Workforce Investment Act, will be used to continue a number of STW initiatives.

A discussion and examination about the potential of other funding streams to support STW activities yielded little hope. Funds administered by the U.S. Departments of Labor and Health and Human Services are focused on programs for the disadvantaged and are seldom school-based. Federal education funds traditionally have not gone to high schools (the U.S. Department of Education focuses most of its efforts on in-school children at the elementary and middle school levels and on financial assistance). And, although high schools receive Carl D. Perkins Vocational and Applied Technology Education Act funds, these are targeted in categorical areas and for at-risk populations. Discussion group participants were not convinced that Perkins, the Workforce Investment Act or the Improving America's Schools Act could pick up the pieces left behind by the STWOA or that any future

focus on changes in high schools in federal legislation would directly address the broader promise and essential elements of the STW vision.

The group concluded:

- other than STWOA, there are few mechanisms to support comprehensive and coordinated opportunities for youth that span schools, workplaces and postsecondary institutions; and

- missing is a strategy that considers a number of federal funding streams and national initiatives and that provides guidance to states and localities in supporting STW programming for young people.

To assist policymakers, practitioners and the wider community in thinking about ways to sustain promising and successful school-to-work strategies, *Ten Essential Principles* have been developed with input from the group. These Principles represent a distillation of critical elements of the STWOA and strategies used by the field over the past six years as they: (1) improve the school experience; (2) expand and improve work-based learning; and (3) build and sustain public/private partnerships. (See box.)

TEN ESSENTIAL PRINCIPLES

Improving the school experience

Principle 1: STW promotes high standards of academic learning and performance for all young people

Principle 2: STW incorporates industry-valued standards that help inform curricula and lead to respected and portable credentials

Principle 3: STW provides opportunities for contextual learning

Principle 4: STW helps to create smaller, more effective learning communities

Principle 5: STW expands opportunities for all young people and exposes them to a broad array of career opportunities

Principle 6: STW provides program continuity between K-12 and postsecondary education and training

Expanding and improving work-based learning opportunities

Principle 7: STW provides work-based learning that is directly tied to classroom learning

Principle 8: STW assists employers in providing high quality work-based learning opportunities

Building and sustaining public/private partnerships

Principle 9: STW connects young people with supportive adults, mentors and other role models

Principle 10: STW promotes the role of brokering/intermediary organizations

Upon review, it is clear that several of the Principles are unique to STW programs and that without continued leadership, focus and support, several of them are at-risk of being lost or ignored. In particular, the following aspects of the Principles are most in danger:

- Support of intermediaries/employers and use of work-based learning are not contained in other federal legislation, and there will be a large gap in these activities when the law expires.

- Few programs have a focus on industry skill standards and linking them to curriculum and academic standards. The National Skill Standards Board (NSSB) has launched a limited number of partnerships, but standards are not expected to be available from more than two in 2000. Additionally, the NSSB also faces the end of its authorization period, although Congress could extend its work.

- Few programs link the secondary and the postsecondary school experience in a meaningful way, yet this is a critical aspect of the STW Principles. While Tech Prep provides the greatest support for articulating programs between high schools and two-year colleges, Tech Prep currently does not reach large numbers of students with strongly articulated programs.

Strategies for sustainability require leadership

Strategies for sustainability require leadership at the local, state, national and federal levels. In order to ensure the sustainability of these Principles, the following strategies are recommended.

- **Local Institutions** (local elected officials, schools, school districts, postsecondary institutions, workforce investment boards and youth councils) should:

—Instill the STW Principles in all their policies and practices and in leadership and professional development activities as well as curricular materials

—Provide options such as career academies and whole school reform models

—Eliminate regulatory impediments

—Create mechanisms to track results for STW programs

—Promote career guidance and counseling

—Expand work-based learning opportunities for all youth

—Ensure community-wide mentorship services

—Create partnerships to provide externships for teachers and counselors

- **States** (Governors, legislatures, state boards of education for K–12 and postsecondary education and workforce development agencies) should:

—Provide assistance to local communities to support the change process, adopt the STW Principles and integrate them into existing policies and programs across education and workforce development programs

—Conduct aggressive information collection, research and evaluation to ensure the dissemination of "best practices"

—Provide fiscal support to promote small learning communities and expand opportunities for career-focused learning

—Incorporate the STW Principles into state accountability systems and teacher/administrator certification criteria

—Develop articulation guidelines for work-based experiences and performance-based assessments in college admission policies, and incentives for including work-based learning for credit in secondary and post-secondary institutions

—Support employer-led organizations and intermediaries to expand work-based learning, and develop contextualized curricula and communications links with employers

—Work with the National Skill Standards Board to integrate academic standards and assessments with occupational standards at appropriate grade levels

- **The U.S. Department of Education** should:

—Support the inclusion of successful school-to-work strategies in school reform initiatives

—Increase funds and focus on needy secondary schools as part of the reauthorization of the Elementary and Secondary Education Act

—Incorporate the STW Principles into the New American High Schools initiative

—Promote the improvement of connections between the K–12 and postsecondary systems

—Support demonstrations of contextualized learning based on integrated academic and occupational standards

—Promote the STW Principles in all professional development efforts

—Continue to track results of STW through research and data collection

—Provide fiscal support to continue the career guidance work begun under STW

- **The U.S. Department of Labor** should:

—Coordinate with other agencies in the development of technical assistance and materials that document "best practices" of work-based learning

—Provide funds for the development of materials that support quality work-based learning for youth

—Support the development and expansion of national and state networks of intermediaries that are linked to employer associations

—Provide guidance and technical assistance to Workforce Investment Boards so that Youth Councils embrace the STW Principles in developing community-wide youth strategies

—Provide information on career opportunities through One-Stop Career Centers

- **The National Skill Standards Board** should:

—Promote and link occupational skill standards to state academic standards

—Provide information on career opportunities in the Voluntary Partnerships through One-Stop Career Centers

—Assist the education and training communities to develop competency-based recognition strategies

—Work with appropriate organizations to expand co-op education programs to incorporate skill standards in both the classroom and work-based materials

- **National and Regional Organizations** (education, training and employer membership, quasi-governmental, research and policy support groups) should:

—Assess what actions can be taken within their own memberships and networks to incorporate the STW Principles, including the role of work-based learning in school improvement efforts

—Form alliances with NSSB Voluntary Partnerships to promote continuation/expansion of successful efforts to integrate curricula and standards

—Promote the development and replication of research-based reform models that incorporate successful STW strategies

—Promote best practices in the development of curricula, coherent sequences of courses aligned with academic and occupational standards bridging secondary and postsecondary learning, and the full range of work-based learning experiences

—Research and refine college admission policies that acknowledge contextual and work-based learning and performance-based assessments

—Broker and strengthen alliances between education and employers at the national, state and local levels

—Advocate new ways of governance that allow the development of public-private partnerships that cut across funding streams

- **Employer Associations** (national, state, and local networks) should:

—Develop a network of national, state and local employer/intermediary organizations to promote STW programs and strategies

—Promote best practices concerning employer involvement in STW including work-based learning, curriculum development, contextual learning, and mentoring services

—Develop and offer opportunities for secondary and postsecondary education faculty to experience the workplace through internships

—Establish new collaborations between employer associations, and secondary and postsecondary institutions to promote work-based learning that moves from career exposure in the early stages to formal recognition of educational credit for knowledge gained in the workplace

—Provide support (in-kind, technical assistance or funding) to members who participate in business-education partnerships or brokering or intermediary organizations

Whereas the above strategies offer ample opportunities to sustain the STW Principles, a need remains for continued coordination of efforts and national leadership. The STWOA and the National School to Work Office have provided this vital leadership to the field during their brief existence. However, once the legislation expires, this leadership will disappear and the focus on the unique aspects of STWOA will be lost.

With this concern in mind, a final closing recommendation is offered—the development of a new entity, a **"STW Collaborative"** funded by foundations, national organizations and government to conduct research, provide documentation, disseminate information on what works and serve as a broker to encourage organizations to develop partnerships to promote STW activities. The Collaborative would be the natural outgrowth of the partnership efforts that are underway and would ensure that the federal investment continues to grow. The Collaborative can provide ongoing support to the federal, national, state and local governments and organizations as they seek ways to continue their groundbreaking work in developing STW opportunities for all students.

I. INTRODUCTION

The School-to-Work Opportunities Act of 1994 (STWOA) represented a bold, strategic effort to help states and localities put in place the necessary structures and supports to help young people make effective transitions, where few had existed, through schooling and career preparation, into further education and careers. It acknowledged the seminal role of education in preparing young people for careers and the vital importance of community partnerships required for the development of a skilled workforce. It took on the arduous task of pulling together disparate and heretofore almost mutually exclusive sectors—K–12 public schools, postsecondary institutions, businesses, employees and community-based organizations—to develop and implement a coherent process of transition for youth. STWOA was not a programmatic effort, but a *systems-building strategy* designed to support and extend state and local education reform and workforce and economic development efforts.

STWOA was designed (some say naively or unrealistically) as a one-time, venture capital initiative to help states and localities support the initial costs of planning and establishing statewide systems. States were given five years of funding with the final round of states receiving their first-year funding in 1998. The authority for the Act is to terminate (or "sunset") on October 1, 2001. At the time of enactment, it was assumed that reauthorization of the Act would not be necessary because school-to-work (STW) efforts would be sustained through other federal, state and local resources. There was an implicit assumption that other key workforce development legislation would be revised to support the core components and basic elements of STWOA, and that its conceptual language would be incorporated into other long-standing grant-in-aid programs (such as the Carl D. Perkins Vocational and Applied Technology Education Act). It was also assumed that the STW systems would build on and incorporate a range of existing and promising career preparation activities, such as Tech Prep, career academies, youth apprenticeship, school-sponsored enterprises and business-education compacts, that were receiving support from other sources.

STWOA reflected a strong federalist foundation of flexibility and freedom, allowing the states to determine the structure of the STW system and the activities to be developed, expanded and linked. Throughout the implementation of STWOA, states and localities have had broad discretion in establishing their STW systems; reflecting the needs and values of state legislatures, local school boards, employers and parents; and responding to regional and local economic and labor market needs. States and localities have had the flexibility to choose their own service delivery mechanisms and establish their own governance

structures. The federal government's role has been that of an enabler, not a strong regulator.

As the nation moves toward sunset of the Act and begins to reflect on what national goals have been accomplished within the limited timeframe, we are faced with a vision of STW that is clouded by a number of challenges that remain unresolved.

Challenges

▪ Overcoming the Problems Imposed by Language

Overcoming the problems associated with a phrase that incorporates both "school" and "work" has represented a challenge since the inception of the Act. These pieces of the continuum concerned with education and its role in preparing young people for eventual employment have never been reconciled properly in public policy, other than to treat general education as a separate entity from education for employment. Neither has their juxtaposition found true acceptance in the minds of a portion of the public that views efforts to prepare youth for employment as a means of channeling them away from postsecondary education. As a result, the construct for the "school-to-work" federal legislation has never been fully understood by the public or many policymakers.

Though it represents the systematic combination of many well-regarded, age-old strategies (such as informal learning, the involvement of community elders and other teachers in the instruction of young people through mentoring and apprenticeship, the integration of manual and thinking skills in applications to work and life issues, and recognizing standards of performance), its comprehensive approach was sufficiently different from the prevailing model separating education and career preparation that it was perceived by various audiences as a new entity or "program," an add-on to prevailing practice, and a passing reform. In an era of concern about the widening gap in wages between college and high school graduates, and the widening gap in achievement between disadvantaged and advantaged youth, the focus on preparation for careers—no matter how high-wage or cognitively demanding—has been viewed by some as potentially diverting many students from college and higher academic pursuits.

Despite the distorting lens of language under which it operated, the term "school-to-work" was actually shorthand used by education and workforce development reformers for the changes that needed to be made, particularly in high schools, to ensure that all young people were better prepared and qualified to pursue a number of high quality options upon graduation. The school-to-work initiative was designed to substantially improve the structure and progression of experiences for young people as they advanced through the pipeline to adulthood. Notwithstanding the problems associated with the term "school-to-work," it is used throughout this document, as opposed to "school-to-career" or some other term, in acknowledgment of its broad use, history, intent and basis in legislation.

▪ Systems Building is Complicated

The systems-building effort anticipated new partnerships in supporting young people through the formal, informal, school and community learning experiences necessary to achieve the academic, occupation and social skills needed to function as effective citizens and employees. It was also an opportunity for communities to think about economic and community development in the context of their human capital resources now and in the future. It was a way of bringing together those institutions that prepare and *supply* workers of the future with those institutions that *demand* well-prepared employees so they could develop programs of mutual benefit that greatly enhance opportunities for individuals to prepare for and enter careers.

Among its many outcomes was the growth of new types of organizations, such as intermediaries at the local, state and national levels, that helped link schools, postsecondary institutions, employers, employee organizations, parents and community-based organizations in mutually beneficial activities and provided services that were outside the traditional roles or capacities of these institutions individually. Few federal initiatives have successfully taken on such complicated tasks or created new organizational structures in the timeframe allotted.

- **Reforms Always Take Time**

The STWOA gave a boost to many reform initiatives, such as career academies and Tech Prep, which required new alignments of high school curricula to support career pathways leading to degree programs in postsecondary education. The STWOA also strengthened counseling programs and career preparation for students, introducing them to the requirements of careers and aiding in planning appropriate experiences and courses of study. It also focused the attention of employers on the need to work with their human resource supply chain (the schools, postsecondary and training institutions) in different ways.

Like any reform effort, this one required time to take hold and to mature. In fact, its role in economic and community development has yet to be fully understood or utilized by many educators and policymakers. Its impact on student motivation and persistence in education is only now beginning to be understood.

- **Evidence of Effectiveness is Emerging**

Because the STWOA was about systems building, initial research provided information on the number of partnerships developed, the governance and the implementation activities of these partnerships. Information on student performance, achievement, and impacts on curriculum and classroom practices have only recently been the subject of research and evaluation on the more long-standing school-to-work models, such as career academies, and to a lesser extent, youth apprenticeships. Also, there are a number of unanswered questions about how to accurately assess the benefits of learning that are not solely based on academics.

It is now clear: (1) the results of legitimate research cannot be obtained after only a few years; (2) there is a great need to synthesize the evidence of the success of STW on student outcomes; and (3) new evaluation approaches that look at non-traditional outcome measures are required to properly assess the impact of school-to-work activities on individuals and institutions.

Although the research on our own results is just developing, we do know about the success of school-to-work systems in other developed countries. We know these systems: (1) produce employees from the majority of each youth cohort with the occupational, academic and the employability skills valued by high performance workplaces and democratic societies; and (2) have the world's lowest youth unemployment rates. We know from our experience with cooperative education that the model works well for individuals and could be far more broadly institutionalized. We also know that the education and training of medical doctors, attorneys, engineers and many other professionals benefit strongly from the apprenticeship and internship models. What we need to show is how school-to-work efforts have made significant changes at the state and local levels and that these changes have resulted in improvements in student outcomes, the effectiveness of teaching and learning strategies, and in the way the public and private sectors support each other.

- **Flexibility in Law Leads to Multiple Approaches that Vary in Effectiveness**

Understanding the impact and value of the STWOA has been further compounded by the

flexibility given to the states and localities in implementation. Although the legislation provided a general framework of school-to-work components, no two grantees left the starting line at the same time or with the same set of goals for system reform.

The experiences of the initial state and local implementers that have recently completed their five-year grant period indicate that the conditions most likely to sustain STW were dependent on:

—strong leadership at the state, local and school building levels in developing a consensus around the goals for STW and the implementation activities supporting these goals;

—a broader policy environment that embedded STW within reforms in education, teacher professional development, workforce development, or that addressed employer concerns; and

—a strong and consistent message and processes in place, regarding for example, funding policies, reporting requirements, technical assistance, communication and information dissemination (Erlichson and Van Horn, 1999).

The experiences of these early states and localities include many gratifying stories of systems change. Yet, (1) a number of key tasks still remain to be completed; (2) the goals for system change and the timeframe provided were overly optimistic; and (3) continued fiscal support and leadership are essential to sustain many of the promising and successful school-to-work strategies.

- **Limitations Existed in the Structure of the Federal Government That Impacted Implementation**

The structure of the federal government was not supportive of comprehensive implementation of the STWOA, although the administrative resources of the U.S. Departments of Education and Labor were cobbled together for this purpose. The STWOA was based on systems change. There is no parallel structure in government organized to support employers and schools in a comprehensive way, or that is focused on reforms spanning the continuum of experiences for young people from elementary, through secondary and postsecondary education. There was much that other parts of government could have brought to bear on the school-to-work initiative, such as the economic development resources of the U.S. Department of Commerce or support for high school reform from the Office of Elementary and Secondary Education (U.S. Department of Education). Out of a concern about the future of their workforces, other federal agencies have begun to support their own school-to-work activities (e.g., the Departments of Defense, Health and Human Services, and Treasury have initiated a number of career academies nationwide). But these initiatives, along with many others, are not a part of a concerted federal effort. The many worthwhile endeavors are weakened by isolation from the others; and so youth, families and employers lack the transparency of a coordinated system needed to plan the links of education, skills and work.

- **Rationale for Sustaining STW Initiatives**

Because our country is still facing the economic, workforce development and education issues that made STW a priority in 1994, we believe the essential Principles of STW need to be sustained.

The gap between the "haves" and the "have nots" has not disappeared. As reported in **The Forgotten Half Revisited** (Halperin, 1998):

—Educational attainment continues to be heavily influenced by family income with high school graduation rates for those in the lowest family income quartile 25 percent lower than for those in the top quartile. Those in the top income quartile may be as much as ten times more likely to earn a college degree than those in the bottom quartile (Barton, 1997).

—Despite a strong economy and generally rising educational attainment, the full- and part-time employment rates of 16–24 year-olds in 1997 were one to three percentage points lower than in 1989. Minority youth had full-time employment rates 20 to 30 percentage points below their white counterparts.

—In March 1997, more than one-quarter of out-of-school youth, although working full-time, were earning less than the poverty line income standard for a four-person family. Young men under age 25 were earning about one-third less (inflation-adjusted) than their counterparts were earning a generation earlier, and young women 16.5 percent less.

Although STW systems provide the necessary links and opportunities for all young people to prepare for and successfully negotiate progressive levels of learning in their development, STW has been a special benefit for "The Forgotten Half" in helping to address many of the special economic, workforce development and education issues they face.

From the Third International Mathematics and Science Study we know that as a group, U.S. students who persevere to the final year of secondary school continue to rank low among students of other developed nations on tests of mathematics and science needed to function effectively in society (U.S. Department of Education, 1998). In many cases, these other countries have strong systems of basic education, a clear policy for preparing young people for entry into the labor market, a large percentage, and in the most successful school-to-work countries a majority, of young people participating in national vocational systems linked to college and university education.

Finally, gaps still exist between the skills that young people learn in school and the needs of industry. According to the Committee for Economic Development (1998, p. 50), "Employers have become concerned with the ability of their communities to retain old businesses and attract new ones—and with the ability of school systems, as the fundamental institution for pre-employment workforce development, to meet evolving employer needs."

These issues have not changed appreciably in the years since the passage of the STWOA, and students are still facing the same labor market barriers. As a country, we continue to make investments in child readiness for success in the early and middle grades. Still, there are continuing concerns about the quality of the upper levels of our K–12 education systems, the effectiveness of the transition from K–12 to postsecondary education and employment training, and the need for expanded approaches

WHO ARE "THE FORGOTTEN HALF?"

In non-statistical terms, they are the young people who build our homes, drive our buses, repair our automobiles, fix our televisions, maintain and serve our offices, schools and hospitals, and keep the production lines of our mills and factories moving. To a great extent, they determine how well the American family, economy and democracy function. They are also the thousands of young men and women who aspire to work productively but never quite 'make it' to that kind of employment. For these members of the Forgotten Half, their lives as adults start in the economic limbo of unemployment, part-time jobs, and poverty wages. Many of them never break free.

(**The Forgotten Half,** 1988)

to instruction and learning to maximize the success and life options of all our young people. That is why STW is so important for students—it is a way of addressing their needs and the circumstances of their lives.

The remainder of this report is organized as follows.

Chapter II is a distillation of a long list of elements of STW the group felt best captured the nature of systemic reform that constitute "Essential Principles" of the school-to-work initiative and are important to preserve.

Chapter III discusses the Principles, including how each evolved and is used, and provides information about the impact of these Principles on students, schools, and other institutions.

Chapter IV contains an analysis of the relationship of STW to selected federal education and training programs, including a chart showing which federal programs support specific Principles of STW. The chapter concludes that while there are many similarities between these federal laws and STW, these laws are not able to sustain and support STW in a comprehensive and systemic manner.

Chapter V provides strategies for an ongoing agenda of the work that needs to be done in areas of leadership, policy, practice, and information dissemination at the national, federal, state and local levels. *Chapter VI* contains a final recommendation for creating a STW Collaborative to sustain the progress made under the STW initiative.

II. TEN ESSENTIAL PRINCIPLES

We discuss below Ten Essential Principles of school-to-work derived from a distillation of critical elements in the School-to-Work Opportunities Act of 1994. For organizational purposes, the Ten Principles are clustered into three categories, although there is a great deal of overlap and interdependency among them.

It is important to consider the Ten Principles in their totality, since no single Principle can adequately address the ingredients required to create a fully functioning STW system with a high quality, inclusive set of experiences for young people.

Among the lessons learned from years of attempting to implement reforms is that no single intervention is effective. Rather, what is needed is a comprehensive and holistic approach involving many strategies and components deployed consistently over time. To be effective, it is important to consider the following Principles as constituting a reinforcing set of strategies for improving schooling, expanding and improving work-based learning opportunities, and building and sustaining public/private partnerships—all essential elements for helping young people make successful transitions to adulthood. When STW works well, it is because communities have been able to put all the pieces together in an integrated fashion.

A. Improving the school experience

Principle 1: STW promotes high standards of academic learning and performance for all young people

Principle 2: STW incorporates industry-valued standards that help inform curricula and lead to respected and portable credentials

Principle 3: STW provides opportunities for contextual learning

Principle 4: STW helps to create smaller, more effective learning communities

Principle 5: STW expands opportunities for all young people and exposes them to a broad array of career opportunities

Principle 6: STW provides program continuity between K–12 and postsecondary education and training

B. Expanding and improving work-based learning opportunities

Principle 7: STW provides work-based learning that is directly tied to classroom learning

Principle 8: STW assists employers in providing high quality work-based learning opportunities

C. Building and sustaining public/private partnerships

Principle 9: STW connects young people with supportive adults, mentors and other role models

Principle 10: STW promotes the role of brokering/intermediary organizations

III. DISCUSSION OF THE ESSENTIAL PRINCIPLES

Following is a discussion of the essential Principles of the school-to-work movement that should be continued after the Act sunsets through strong national leadership and modest, but focused, resources. Though research is cited to illustrate the Principles, they are not all totally advanced by what we have learned from research and or what was specific to the legislation. Rather, the Principles come from our observations of responses evolving from the field to address the challenges faced by young people and institutions that sustain and guide their development. They reflect what we are learning about well-designed STW initiatives and the relationships among institutions that have been created to support them. Where necessary, definitions of terms are provided and areas where leadership and support are particular concerns are highlighted.

The Principles and the supporting information are provided as a guide for discussion and action among policymakers and practitioners at the national, state and local levels in taking stock of the school-to-work systems-building effort to date, assessing how it has evolved and its value to states and communities, and in thinking about the next steps required to sustain the successes and promise of this reform.

A. Improving the School Experience

Principle 1: STW promotes high standards of academic learning and performance for all young people

The stated intent of Congress in the STWOA was for STW to be: (1) a part of comprehensive education reform, and (2) integrated with the systems developed under the Goals 2000: Educate America Act and the National Skill Standards Act of 1994.

We do not have all the evidence that we need to demonstrate increased achievement on standards. Nevertheless, we know that STW motivates students to achieve at higher academic levels, provides guided educational experiences outside the classroom to reinforce academic learning and creates opportunities for enhancing learning through expanded instructional strategies, such as applied or contextual learning. A growing body of positive evidence indicates that participation in well-designed STW programs: increases students' academic focus and motivation as evidenced by course selection and more rigorous mathematics and science curricula; increases rates of college-going; and lowers dropout rates (CED, 1998).

Effective STW efforts link demanding academic courses with quality career/technical courses, ensuring that student achievement is enhanced through (1) enrollment in higher-level language arts, mathematics and science courses; and (2) improved opportunities to meet curriculum and performance standards,

FACT When compared with similar students not involved in STW, high school students in Philadelphia's School-to-Careers programs had higher grade point averages (GPA), higher school attendance rates and were more likely to graduate.
(Philadelphia School District Study, 1997; and evaluation by F. Linnehan, Drexel University, 1998)

FACT Seniors in New York's STW initiative took more advanced science, mathematics and computer science courses—and maintained comparable grades—than a less involved comparison group. (Westchester Institute for Human Services Research, Inc., 1998)

FACT In Boston, STW students experienced lower dropout rates, evidenced better attendance, were more likely to have passed academic courses and to be promoted to the next grade level, and had fewer suspensions than non-STW students. Graduates of Boston's Pro-Tech (STW) initiative were 16 percent more likely to attend college in the year following graduation than the national average (87 percent vs. 62 percent).
(Jobs for the Future and the Boston Private Industry Council Survey, 1998)

FACT In a public opinion survey, 90 percent of teens said that school would be more interesting and meaningful if it were taught in connection with careers.
(Teen Attitudes Toward Work, Bruskin Goldring Research, 1994)

to engage in challenging assignments, and to obtain extra help in meeting higher standards.[1]

Leadership and support are needed to:

- Rigorously evaluate the impact of STW strategies on student academic learning and performance.
- Promote the development and replication of effective research-based educational reform models that incorporate successful STW strategies.

Principle 2: STW incorporates industry-valued standards that help inform curricula and lead to respected and portable credentials

When STW was first launched, it was during a time that most people thought of skill standards as applicable only to narrow, specific job training for the crafts and trades. Increasingly, there is a growing recognition that occupational standards are indeed much deeper and broader with a gradation of proficiency and skill levels—all based upon a strong academic foundation of reading, numeric and communication skills. While critical, these core academic skills must be supplemented by additional skills for success in the world. Additional occupational standards are needed, building from the general work-place readiness skills (sometimes referred to as SCANS), moving to the next level of broad skills needed for specific industries (e.g., health, financial services) and broad occupations within those industries, and then to more specialized or occupational specific skills that are the most narrow and also the most deep (e.g., nurses, doctors). With this broader conception of occupational standards, it is easier to envision how the blending of the academic and comprehensive skill standards can assist the K–12 system

[1] These are among the "Things That Matter Most in Improving Student Learning" in the Principles of the *High Schools That Work* initiative (Bottoms, 1998).

to improve the linkages with postsecondary and other training programs.

A number of states have begun to integrate cross-disciplinary skills, such as SCANS, into the K–12 academic core curriculum to foster the integration of academic and occupational curricula, to encourage critical thinking and reasoning skills and to make standards-based reform efforts more coherent by linking the different disciplines.[2] Also, there has been a steady increase in the number of STW partnerships and secondary schools offering skill certificates and a greater emphasis on new graduation requirements among partnerships and their member districts (Mathematica Policy Research, Inc., Fall 1996, Fall 1997 and Fall 1998).

Still, the available occupational standards needed to build bridges between secondary and postsecondary institutions and in designing coherent programs of study do not yet cover a large number of career clusters. These standards form a communication link between the requirements of the workplace and providers of education and training, and the context for developing and assessing the value of work-based learning experiences for students.

Only a few examples exist in a small number of career areas of school and work-based integration that combine academic and nationally-validated occupational standards and that have attendant certification systems, although these models should become available within the next five years.[3]

Leadership and support are needed to:

- Promote and link ongoing efforts to develop state academic standards to occupational skill standards.
- Document, disseminate and continue efforts to develop curricula and coherent sequences of courses aligned with academic and occupational standards that bridge secondary and postsecondary learning.
- Provide extensive professional development in instructional strategies to support the curricula and career pathways aligned with academic and occupational standards.

Principle 3: STW provides opportunities for contextual learning

Contextual learning is at the core of STW. This is learning that occurs in close relationship with actual experience and that allows students to test academic theories through real world applications.[4] Contextual learning builds upon life experiences and existing knowledge; makes explicit how knowledge and information can be used; provides opportunities for exploration, discovery and invention; and is based upon sharing, responding and communicating with others. Students engaged in contextual learning are more intrinsically motivated, use self-directed methods aimed at acquiring in-depth understanding, and have superior long-term recall than students involved in more traditional, teacher-led activities that

[2] The five SCANS competencies represent workplace know-how and span the chasm between school and the workplace. They are the hallmarks of today's expert worker and lie behind the quality of every product and service offered on today's market. They include five competencies of effective workers (productive use of resources, interpersonal skills, information, systems and technology); and two foundation skills—basic skills (reading, writing, arithmetic and mathematics, speaking and listening) and thinking skills (thinking creatively, making decisions, solving problems, seeing things in the mind's eye, knowing how to learn and reasoning) (SCANS, June 1991).

[3] The most advanced examples, though still incomplete, can be found in multi-state consortia projects, such as ***Building Linkages***, that integrate academic and industry-recognized skill standards in the fields of health care, manufacturing and business management. Products to be developed include: common health science technology goals and standards, a best practices document with suggested strategies and activities to meet the needs of all learners, nationwide implementation of a "train the trainers" program, and certificates of competencies that are portable among different education levels and states and between school and the health care industry.

[4] Contextual learning is a proven concept that incorporates recent research in cognitive science to the effect that the mind naturally seeks meaning in context and does so by searching for relationships that make sense and appear useful (CORD 1999).

are more dependent on paper and pencil tests and activities (Pierce and Jones, 1998).

The majority of people learn best through informal, contextual experiences (Caine and Caine, 1991, Gardner, 1983, Kolb, 1984). Therefore, accommodating the learning styles of all learners (not just those who learn best abstractly) requires the use of a variety of learning strategies, multiple ways of organizing curriculum content, and diverse contexts for learning—opportunities that STW readily provides. However, providing effective contextual learning creates extensive challenges for schools and training institutions and requires a rethinking of how time is used, content is taught, teachers are prepared, and the role of community partners in the education process.

Leadership and support are needed to:

- Promote continued development of effective contextual learning experiences in the classroom and in community/work-based learning environments.
- Provide professional development to support high quality contextual learning experiences for students.
- Promote the development of instructional materials that use and reinforce contextual learning.

Principle 4: STW helps create smaller, more effective learning communities

STW requires reorganizing the learning environment to support career-focused curricula, contextual learning, the integration of academic and occupational skill development, and work-based learning. As such, it has helped to expand the growth of smaller learning communities, such as career academies[5] as well as to increase interactions between young people and adult mentors at the work site. Research indicates that small schools or learning communities are more likely to create and sustain conditions that are conducive to improving student outcomes, such as cohesive teacher community, a positive culture, and strong relationships between students and teachers (Visher et al, March 1999).

Evaluations of career academies find academy students perform better than non-academy students on measures, such as school attendance and retention through graduation (Stern, et al, 1998). Research also indicates that career academies function as communities of support for students, providing more opportunities for students to: (1) work collaboratively in motivated peer groups; (2) feel that what they are learning is important for their future and relevant to their goals; (3) engage and achieve; and (4) have teachers who provide personal attention and have high expectations of student achievement (Kemple, 1997).

Leadership and support are needed to:

- Recognize and encourage the expansion of high quality, small learning communities.

Principle 5: STW expands opportunities for all young people and exposes them to a broad array of career opportunities

STW rejects tracking. If implemented appropriately, STW (1) expands opportunities for students by opening up and organizing the curriculum in more logical and meaningful ways; (2) exposes them to occupations, career paths and experiences in the community they might not otherwise know; (3) equips them with the skills, academic knowledge, and personal competencies required in the workplace and for continued education; and (4) provides

[5] Career academies are schools-within-schools that focus on a career theme, combining technical and academic content, provide work-based learning opportunities in the summer and during the school year in jobs related to their field of study, and are run by a small team of teachers from various disciplines. Classes are usually smaller than is typical in the high school. Regular contact with the same team of teachers and students over a two, three or four-year period contributes to students' sense of membership in a caring community (Stern et al, 1992).

FACT Whole school reform models that use work-based learning (WBL) and other STW strategies have been shown to be effective in raising standards and improving low-performing schools. After instituting the High Schools That Work model, the dropout rate at Howard Vocational High School in Wilmington, Delaware declined from 7.6 percent per year in 1990 to 0.6 percent in 1997. In a statewide writing assessment, graded on a scale of one to four points, only 3 percent of Howard students scored 3.5 or higher in 1993, but 22 percent achieved this level in 1997; 89 percent scored at or above 2.5 in 1997. (Hamilton and Hamilton, 1999)

FACT In comparisons of school alumni in Philadelphia who had been involved in work-based learning (WBL) and those who had not, 90 percent of WBL students (significantly greater than the control group's response about their high school education) agreed that work-based learning helped them learn about different careers. When compared with the control group, these students were more satisfied with the employment preparation they received during high school, agreed that WBL prepared them well for future employment and felt that the experience was helpful in actually landing a job. (Madonna Yost Opinion Research, Summary of Preliminary Findings, 1999)

FACT STW has been found to make learning more relevant for students, allowing them to see a connection between their academic coursework and career interest. These findings are particularly evident among African American students and the non-college bound. For students with no future education plans after high school, participation in academic classes they perceived as focused on their career goals doubled from 10 percent for 1996 seniors to 20 percent for 1997 seniors. (National STW Evaluation Report, 1998)

FACT Preliminary research shows that young people who are in STW programs attend post-secondary education and persist in postsecondary education at rates similar to students who were not involved in STW. High school seniors in 1996 with high and low academic performance (as defined by class rank based on GPA, attendance rates, completion of a college-prep program and entry to college) participate in career development, career-related academics or work experiences linked to school in comparable numbers. (National STW Evaluation, 1999)

FACT A broad spectrum of youth—not just high or low achieving students—participate in STW, and these efforts have enhanced the educational and employment opportunities, particularly for low achieving students. (Kemple, et al, 1999; Hershey, et al, 1999; Bottoms, 1998; Hall, 1998)

FACT STW is also inclusive of students with disabilities. In school year 1997-98, students with disabilities represented 10.3 percent of all 12th graders participating in intensive STW activities (including paid or unpaid internships related to a student's chosen career major). (National STW Evaluation Report. 1998)

them with tailored opportunities to meet their individual needs. STW programs provide the skills and knowledge young people need to make more informed decisions, to progress toward postsecondary education and to be successful in a career.

Quality career development goes beyond simple academic or vocational guidance to help integrate academic subject matter, student interests and strengths, learning preferences and education goals.[6] Through activities, such as career awareness in the elementary years and career exploration in the latter grades, young people not only learn about a variety of careers and occupations, but also begin to identify the skills required to succeed in these areas and to start making informed career decisions.

In many communities, STWOA resources have served to revitalize inadequately supported career guidance and development. STW funds have allowed schools and communities to address this deficit in school offerings and devote substantial resources to correct this problem (Hershey et al, 1999).

Leadership and support are needed to:

- Insure that all youth can meet the academic and occupational standards necessary to participate successfully in high quality STW experiences and prepare for postsecondary education and competitive careers.
- Assist high schools, particularly those in high poverty areas, to develop high quality programs and public/private partnerships that assist students in preparing for postsecondary education and competitive careers.
- Promote the development and continuation of high quality career guidance and development activities for students beginning in the middle grades. These efforts should include professional development, including teacher and employer externship programs, documentation of model efforts, dissemination of effective practices, and technical assistance to schools and businesses.

Principle 6: STW provides for program continuity between K–12 and postsecondary education and training

STW is a mechanism for organizing coherent sequences of courses into programs of study, linking school and community experiences with more formal employment training, and creating opportunities for articulation and preparation for the next level of learning (e.g., from middle to high school and high school to postsecondary education and training).

Research findings on students involved in STW activities attests to the preparation, supports and pathways provided into postsecondary education.

According to the National STW Evaluation, the number of two- and four-year colleges participating in local STW partnerships are growing each year (Hershey et al, 1999). A few states have also begun altering postsecondary admissions policies to include competency-based admission policies and are considering work-based learning experiences in the admissions process; are evaluating student proficiency requirements and admissions standards for the university system in conjunction with state efforts to develop a workforce preparation system; and are working with schools to implement performance-based assessment and strategies for portfolio assessment in admissions.

[6] Career development is a sequence of coordinated and comprehensive activities designed to expose young people to a variety of career and occupational options, beginning in the early grades with activities, such as guest lecturers or field trips to work sites. Later, career development can encompass career exploration activities, in which students examine specific careers more closely through job shadowing, mentoring experiences, or classroom projects that apply academic concepts to the careers they are examining. They may participate in structured sequences of courses in career pathways that provide further exposure to careers, as well as work-based learning experiences that focus on a specific job or occupation.

FACT In New York State, more than 70 percent of 1997 STW seniors planned to enroll in either a four-year or two-year college, with the majority selecting the four-year option—a proportion equivalent to the college-going plans of the comparison group and similar to national statistics. (Westchester Institute for Human Services Research, July 1998)

FACT All 85 of the first class of students who graduated from Boston's ProTech flagship STW system continued on to either a two-year or four-year college. Overall, Boston's STW students are 18 percent more likely to attend college than their non-STW peers. (Center for Labor Market Studies at Northeastern University and G. Hall, 1998)

A survey of secondary-postsecondary STW partnerships in school year 1998–1999 indicated over half of partnerships include agreements involving dual enrollment (56.6 percent of secondary schools and 50.9 percent of postsecondary schools); and articulation agreements granting college credit or advanced standing for secondary school coursework (57.2 percent and 53.7 percent, respectively). Among postsecondary schools, 19.7 percent had articulation agreements granting college credit for high school work-based learning (Mathematica Policy Research, Inc., STW Local Partnership Survey, fall 1998).

Some of the most highly regarded high school programs, such as the Thomas Jefferson High School for Science and Technology in Fairfax County, Virginia, the New Visions Careers in Health Program in Rochester, New York, and the Blair Science, Mathematics and Computer Science Magnet Program in Montgomery County, Maryland, are strongly anchored in STW components and are explicitly designed for college-bound students. On the other hand, students who have been disaffected from the traditional academic school curriculum have improved their academic performance through the applied and hands-on pedagogies of STW and have been motivated to continue their studies in postsecondary education (Bailey and Merrit, 1997).

Leadership and support are needed to:

- Continue the development and acceptance of college admissions policies that acknowledge student STW instructional strategies, work-based learning experiences and performance-based assessments.
- Continue the development and expansion of coherent sequences of courses and work/community experiences that span secondary and postsecondary education.
- Encourage professional development for teams of teachers from secondary and postsecondary education that emphasizes developing sequences of applied courses in a career major.

B. Expanding and improving work-based learning opportunities

Principle 7: STW provides work-based learning that is directly tied to classroom learning

STWOA defined work-based learning as an essential component of STW programs and asserted that all students could benefit from education incorporating work experience.[7] Work-based learning is: (1) an integral part of the academic curriculum, reinforcing academic

[7] Work-based learning refers to a variety of instructional strategies involving learning experiences that occur outside the classroom in a community setting. Work-based learning represents a continuum of activities from "exposure" or introductory experiences with the workplace, such as job shadowing and field trips to more intensive experiences, such as cooperative

FACT Whereas work-based learning and career awareness activities are available to students that are not in STW programs, students in career academies have been found to participate more frequently and more intensely than their peers in career awareness and work-based learning activities. (Kemple, 1999).

FACT Jobs that students obtained through school (versus on their own) provided more access to diverse workplaces, involved more training, provided more feedback on workplace performance, and had greater links to academic work in the classroom. (National STW Evaluation Report, 1998)

FACT In New York State, work experiences of STW seniors were of better caliber, that is, these experiences contributed in more substantial ways to their education, than those of the comparison group. STW students more often: were engaged in problem-solving activities; used their imagination and creativity; engaged in teamwork; and learned and practiced new skills. (The Westchester Institute for Human Services Research, Inc. 1998)

and occupational skills learned in the classroom; and (2) a way of providing career exploration and a broad understanding of an occupation or industry, motivating students, introducing generic workplace skills and learning entry-level technical skills.

Through both formal and informal work-based learning,[8] students begin to apply academic knowledge to workplace settings and gain greater respect for, and facility in, the types of learning required by the workplace. Students acquire skills and develop attitudes that are critical to on-the-job success, including: an understanding that learning often is related to a clear and meaningful goal; the need for quality and the consequences of compromised quality; critical thinking; different approaches to problem solving; the importance of immediate feedback for learning and improvement; improved skills for working in teams; a new appreciation of the importance of deadlines; and a higher motivation to examine a particular subject more deeply.[9]

Despite the benefits of work-based learning, many students, parents, teachers and counselors do not value work-based learning as an important and enhancing component of education (Hughes 1998). Research also indicates that the bulk of work-based learning involves shadowing, orientation and career choice-related activities, whereas there is great benefit to be derived from, and more effort should be generated toward, work-based learning that allows students to engage in actual production and participate in realistic training activities.

education, internships and apprenticeships where youth can receive school credit, wages, and are considered essential to the productiveness of the workplace. Service-learning is also considered a work-based learning strategy. Through service activities in the community, young people are able to perform needed volunteer functions, reinforce academic skills, and acquire important skills available only in a non-school or community setting.

[8] In informal workplace learning, the learning process is not determined by the organization (Center for Workforce Development, Education Development Center, Inc. January 1998).

[9] Ibid. p. 47.

Leadership and support are needed to:

- Promote models and efforts that raise understanding and recognition of the value of work-based learning among parents, teachers, counselors and employers.
- Promote models of flexible school scheduling that allow for work-based learning experiences that maximize student understanding of workplace requirements and the skills they need for success in the workplace, engage them in meaningful work and provide on-site training.
- Promote research on the impact of work experience as a tool for enhancing academic concepts and ways of documenting this impact.
- Promote research that leads to a better understanding of: the skills and knowledge best learned in class and the work setting; how work-based learning can most effectively teach those specific skills; and the value of professional development opportunities for school personnel in businesses and industries.

Principle 8: STW assists employers in providing high quality work-based learning opportunities for students

Through partnerships with employers, schools are able to provide a range of learning experiences for students. Nearly 55 percent offer job shadowing; 44 percent offer co-op programs; 40 percent provide school-based enterprises; 35 percent provide mentoring activities; and 34 percent offer student internships (Progress Measures Report, 1998). A study by the National Employer Leadership Council indicates that employers also reap measurable business benefits from STW in terms of: reduced recruitment costs, reduced training and supervision costs, reduced turnover, increased retention rates, higher productivity of students, and higher productivity and promotion rates of STW program graduates who eventually are hired compared with those of other newly hired workers (National Employer Leadership Council, n.d).

One of the most significant outgrowths of STW implementation has been a growing clarification of the unique contributions and responsibilities of employers within the workforce development system. The role of employer has substantially moved beyond that of advisor to schools and the workforce development system, to that of education and training provider and stakeholder with a vested interest in shaping education and training policy. There is an expanding recognition within and outside the employer community that partnerships entered into with publicly-supported workforce development organizations must not be merely for the purpose of being a "good corporate citizen" but must be in their vested interest and a strategic part of their business. In the long run, advancements in the quality of work-based learning for young people mean better-prepared future employees, reduced recruitment costs for firms and reduced employee turnover (Wills, 1998).

Leadership and support are needed to:

- Assist employers, particularly small and medium sized firms that represent approximately 80 percent of the businesses in the U.S., in providing high quality work-based learning experiences through models, demonstrations and incentives.
- Assist networks of national, state, and local employer associations working together to ensure STW success.

C. Building and sustaining public/private partnerships

Principle 9: STW connects young people with supportive adults, mentors and other role models

Through connections with other partners, STW extends the place of learning beyond the school to community and business sites, and

[10] Mentoring is a structured, one-to-one relationship or partnership between a young person and an adult.

expands opportunities for young people to connect with knowledgeable adults and role models in mentoring and guidance relationships.[10] One of the most consistent findings from the literature on youth development is that young people need adults involved meaningfully throughout their development—as teachers, mentors, supervisors, coaches, counselors, relatives, religious leaders, etc.—in order to make a successful transition from youth to adulthood *(More Things*, 1999, pp. x–xi).

Research documents the impact of high quality mentoring and adult relationships on improving the behavior of young people and reducing their involvement in illegal activities. Studies also show that young people involved in mentoring relationships with caring adults who serve as role models and provide guidance, when compared to similar young people, have improved grades and school attendance (Ibid., pp. 109–111, pp. 115–118). However, for mentoring to be successful, an infrastructure must be in place that fosters the development and support of effective relationships (Sipe, 1996).

Mentoring young people in the workplace also generates a new set of benefits for employers. They have found that many of their employees (e.g., line workers and supervisors) enjoy helping young people learn and that such activities boost worker morale and self-assurance. Mentoring fosters an atmosphere of learning, teamwork, and flexibility in the workplace, and can reduce the costs of recruiting, screening, selecting, and training new workers.

Leadership and support are needed to:

- Create and maintain the infrastructure necessary for sustaining effective mentoring through procedures, such as screening, orientation and training, support and supervision of mentors and work site supervisors of young people.

Principle 10: STW promotes the role of brokering/intermediary organizations

An intermediary is defined by the National School-to-Work Office as an organization or group of organizations that performs the "strategic" functions of: convening local leadership; generating linkages with other institutions; aligning resources and promoting STW in several venues; setting goals and outcomes and then measuring the success of STW; and brokering or providing specialized services that link students with employers (such as support services to employers, professional development opportunities for staff in schools, businesses, community-based organizations and other agencies) and an array of other connecting activities.

Because they are efficient and effective mechanisms for working with multiple schools, school districts, postsecondary institutions, community-based organizations, and the complex network of national, state, and local business, trade and professional associations, intermediaries have gained the support of the employer community and other STW partners. Intermediaries are critical in assisting employers to interface with other stakeholders in areas such as: providing information about career opportunities; identifying skill requirements and skill standards; helping to design occupation-related curricula and assessment materials; and providing work-based learning opportunities for both teachers and students. They are also important in assisting employers to resolve issues specific to their firms, such as: recruitment, orientation and training employees in mentoring, assessing student progress, and modifying internal human resource practices to incorporate the work-based learning needs of students (Wills, 1998).

Leadership and support are needed to:

- Assist employer associations, local consortia and other networks that are emerging as intermediaries to continue critical connecting activities required for effective relationships among STW partners.

IV. THE RELATIONSHIP OF SCHOOL-TO-WORK TO SELECTED FEDERAL EDUCATION AND TRAINING PROGRAMS

As the School-to-Work Opportunities Act moves toward its legislated expiration, policymakers and practitioners are trying to determine whether other federal education and training programs can help support and sustain current STW efforts. This chapter provides a brief review of a number of federal education and training laws and other initiatives to determine if these programs and initiatives can provide further support for elements of STW programs.

The programs reviewed here include:

- Workforce Investment Act (WIA), including Job Corps and Youth Opportunity Grants
- Carl D. Perkins Vocational and Applied Technology Education Act (Perkins), including Tech Prep
- Goals 2000
- Comprehensive School Reform Demonstration Program (CSRD), also referred to as Obey-Porter
- Elementary and Secondary Education Act (ESEA) Title I (Support for Disadvantaged Students), Title II (Dwight D. Eisenhower Professional Development), Title III (Technology Literacy Challenge Fund and Technology Innovation Challenge Fund), and Title VI (Innovative Education Program Strategies)
- Gaining Early Awareness and Readiness for Undergraduate Program (GEAR-UP)
- TRIO
- Personal Responsibility and Work Opportunity Act of 1996
- YouthBuild
- Youth Service and Conservation Corps
- National Skill Standards Board (NSSB)
- Individuals with Disabilities Education Act (IDEA)
- The Rehabilitation Act of 1973

Several other federal laws were considered: Ed Flex (Education Flexibility Partnership Act of 1998) and Work Flex (WIA). These two laws allow state and local program administrators to request waivers to a number of federal programs to allow for greater flexibility in providing education and job training services to youth and adults. The decisions to use Ed Flex or Work Flex to support elements of STW are made by state and local leaders; therefore, it is difficult to assess to what extent these laws at a general level support STW. However, they clearly are tools that states should make maximum use of when developing strategies to sustain STW.

Only a handful of the federal programs reviewed have an explicit relationship to the essential

Principles of STWOA (as defined in the previous chapter and listed on the attached chart). Most of the federal programs reviewed support only a few of the essential Principles in an isolated manner. In addition, most of the federal programs reviewed are targeted at distinct categories of youth, not to all students, as does the STWOA. Because of these limitations, it will take creativity and innovation to patch together various sources of federal (and state, local, or private) funds to continue STW activities at the community level.

However, with sustained leadership and vision and support from other programs, it is possible to develop comprehensive, systemic career preparation programs at the local level. Non-federal programs that embody the Principles of STW, such as "High Schools That Work" of the Southern Regional Education Board and career academies, discussed later in the paper, provide examples of how communities can design comprehensive high school career preparation programs. While in some cases, these programs have received some limited federal support, most have relied on existing state, local, and private funds for their primary support.

The Programs

- **Workforce Investment Act (WIA)**

The Workforce Investment Act provides support for workforce development for adults and includes a separate title for youth programs. Low-income youth, 14–21, with other educational or social disadvantages (such as being a dropout or a teen parent) are eligible for services.

Under WIA, local youth councils will be established to develop community-wide plans for programs for eligible youth. Services for youth can include academic instruction (either in school or in alternative settings), summer employment, work experience, occupational skill training, adult mentoring, supportive services, leadership development, and comprehensive guidance and counseling. Youth councils may serve as one of the best opportunities to develop links between various stakeholders in the community and to act as a convenor of employers, educators, trainers, and youth providers to develop comprehensive strategies for youth.

Work experiences for youth can be planned, structured learning activities that take place in a workplace for a limited period of time. Work experiences are designed to enable youth to gain exposure to the working world and its requirements. Work experiences should help youth acquire the personal attributes, knowledge, and skills needed to obtain a job and advance in employment, and may include the following elements:

—Instruction in employability skills or generic workplace skills, such as those identified by the Secretary's Commission on Achieving Necessary Skills (SCANS)

—Exposure to various aspects of an industry

—Internships and job shadowing

—The integration of basic academic skills into work activities

—Entrepreneurship

Because of the diverse needs of the eligible population, each youth will be assessed to determine what services are needed. As such, WIA will take a very individualized approach to dealing with youth. STW activities could be provided under WIA to the extent the local youth council determines that they are an important part of the education and training services offered, and to the extent employer placements can be found. WIA also encourages mentoring relationships between adults and youth.

The *Job Corps* program is also contained in WIA. Job Corps is the nation's largest residential education and training program for disadvantaged youth. It is a full-time, year-round residential program that offers a comprehensive

array of training, education, and supportive services. The typical Job Corps student is an 18-year old high school dropout who reads at the seventh grade level, is a member of a minority group, and has never held a full-time job. Recent changes in the Job Corps program now require formal links to local employers and employer organizations. Jobs Corps also provides for career counseling and works with each individual to explore a range of options, such as further education or a career path. One of Job Corps' strengths is connecting young people with mentors and advisors.

The *Youth Opportunity Grants* (YOG) program, also authorized in WIA, is intended to saturate high-poverty urban and rural communities (such as Enterprise Zones) with sizable resources to cause a significant drop in youth unemployment and idleness in these communities. Funds will be allocated to local Workforce Investment Boards to develop and expand services to in and out-of-school youth. Services to youth can include academic remediation, career guidance and counseling, and work-based and community service learning.

- **The Carl D. Perkins Vocational and Applied Technology Education Act**

The Perkins Act provides grants to state education agencies for the cost of vocational and technical education programs, services and activities. Vocational and technical education means organized educational activities that offer a sequence of courses that provide students with the challenging academic and technical knowledge and skills needed for further education and for careers (other than careers requiring a baccalaureate, master's, or doctoral degree) in current or emerging employment sectors. States are required to ensure that students, including disadvantaged students, meet challenging academic, vocational, and technical standards. Funds can be used to support models like career academies and the "High Schools That Work" programs that contain many of the STW Principles.

Tech Prep was authorized in 1990 to serve as a catalyst to reform vocational-technical education. Separate from the basic state grant in the Perkins Act, Tech Prep dollars have been used by states and communities to create models of change. Tech Prep programs are designed to provide a comprehensive model for career preparation by (1) linking secondary and postsecondary education through a planned sequence of courses in a career field for four or six years leading to a technical certificate or associate or baccalaureate degree; (2) integrating academic and vocational curriculum; (3) using contextual and applied teaching strategies as a way of helping students meet challenging academic standards; and (4) providing for career awareness and counseling.

Communities are able to use Perkins basic grant funds to support and expand Tech Prep programs, and a number do so. Because of its similarity to STW, Tech Prep has served as the foundation for STW efforts and in many states Tech Prep and STW operate seamlessly. In communities with the full Tech Prep model, programs promote essential STW Principles: high academic standards, expanding opportunities for students and exposure to a broad array of career opportunities, using contextual learning, creating small learning communities, linking K-12 with postsecondary education and training, linking classroom and work-based learning, and connecting students with supportive adults and mentors.

While Tech Prep originally did not have a strong focus on employers when first enacted, recent amendments to the Act in 1998 added a focus on "utilizing work-based learning and worksite learning where appropriate and available" and in increasing employer involvement in career education programs.

- **Goals 2000, Educate America Act, P.L. 103-227**

The purpose of Goals 2000 is to improve the quality of education for all students by improving student learning through a long-term,

broad-based effort to promote coherent and coordinated improvements in the system of education at the state and local level. Funds are provided to each state to help develop content standards and to help local schools develop system-wide improvement strategies to allow each child to reach those standards.

Goals 2000 references the STWOA and recommends coordination of planning between the two pieces of legislation, but Goals 2000 does not specifically mention school-to-work strategies as a way to improve schools. However, states have a great deal of flexibility in determining how to improve their schools and could conceivably use STW strategies to increase achievement. Goals 2000 expires at the end of 1999, and it appears that it will be consolidated into other elementary and secondary education legislation focusing on standards and student achievement.

- **Comprehensive School Reform Demonstration Program, (Obey-Porter), P.L. 105-78**

The Comprehensive School Reform Demonstration Program (CSRD), commonly referred to as Obey-Porter, provides funds to state and local education agencies to develop comprehensive reform strategies that (1) are based on reliable research and effective practices and (2) include an emphasis on basic academics and parental involvement so that all children can meet challenging state content and performance goals.

Funds under CSRD are available to help schools implement whole school reform strategies based on a number of national models; however, only a few of these models have a prime focus on the secondary school level. Each school that receives funds is able to select the model it wants to implement, so there is a great deal of flexibility and choice. Grants for schools are relatively small and generally provide for planning, not service delivery. Two models, "High Schools That Work" and the Talent Development High School with Career Academies, employ career preparation strategies for students.

- **ESEA, Title I, Support for Disadvantaged Students**

This program provides formula grants through state education agencies (SEAs) to local education agencies (LEAs) to improve teaching and learning in order to enable low-achieving children to meet challenging state content and student performance standards. Funds support extra instruction in reading and mathematics, science, and computers, and special preschool, after-school, and summer programs to extend and reinforce the regular school curriculum. Most Title I funds are spent at the elementary and middle school level; only approximately eight percent of funds are spent at the secondary level. However, Title I provides enough flexibility to allow states and districts, if they choose, to support whole school strategies at the secondary level based on career preparation and STW strategies, as long as academic achievement is attained. ESEA is being reauthorized by Congress, however, major changes to Title I are not anticipated. The U.S. Department of Education has proposed putting a greater emphasis on secondary schools in ESEA by creating a national demonstration program based on the New American High Schools program, which focuses on high academic achievement though comprehensive career preparation programs.

- **ESEA Title II, Dwight D. Eisenhower Professional Development**

This program supports high-quality, sustained and intensive professional development activities in the core academic subjects aligned to challenging state content and student performance standards to improve teaching and learning. Funds primarily support teacher improvement efforts at the district and school levels based on a comprehensive review of their professional development needs. This program encourages the integration of

professional development into the daily life of the school, moving beyond traditional one-day, "one-shot" workshops. Funds can be used to support professional development in the area of project-based, applied or contextual learning. This program will most likely be folded into a new, larger program focusing more broadly on professional development.

- **ESEA Title III, Technology Literacy Challenge Fund and Technology Innovation Challenge Fund**

These programs provide funds to states and needy local school districts to provide support for the purchase, installation, and integration of technology into schools. Funds can be used for training staff and teachers, for integrating the technology into the curriculum, and to help teachers make better use of technology in the learning process. In order to receive funds, a state must have a statewide educational technology plan that may be part of the state's Goals 2000 plan.

- **ESEA Title VI, Innovative Education Program Strategies**

These formula grants assist local education reform efforts that are consistent with and support statewide reform efforts under the Goals 2000: Educate America Act. They also support state and local efforts to accomplish the National Education Goals; implement promising educational reform programs; provide a continuing source of innovation and education improvement, including support for library services and instructional and media materials; and help meet the special education needs of at-risk and high-cost students. Funds can be used for instructional and educational materials, including applied and contextual learning as long as these efforts are linked to the state or district plan to meet academic standards. Title VI will also be reauthorized and will likely be consolidated with programs that support professional development, school-wide reform efforts, or class size reduction.

- **GEAR-UP**

GEAR UP is a relatively new program to encourage more young people to have high expectations, stay in school, study hard, and take the right courses to go to college. Grants will be awarded to partnerships between colleges and middle schools in low-income communities, plus at least two other partners. Funds may be used for informing students and parents about college options and financial aid, promoting rigorous academic coursework based on college entrance requirements; working with a whole grade-level of students in order to raise expectations for all students; and providing comprehensive services including mentoring, tutoring, counseling, and other activities such as after-school programs, summer academic and enrichment programs, and college visits, starting with 6th or 7th grade students and continuing through high school graduation.

- **TRIO**

The TRIO programs (seven separate initiatives) provide funds to colleges and community organizations to help low-income students prepare for and enter college. Two programs are particularly relevant to STW programs. Upward Bound provides support to low-income or first-generation college students in their preparation for college. All Upward Bound projects must provide instruction in basic academics, including math, laboratory science, composition, literature, and foreign language to help prepare for higher level courses. (A separate Upward Bound program focuses solely on math and science achievement.) The Talent Search program identifies and assists individuals from disadvantaged backgrounds who have the potential to succeed in higher education. The program provides academic, career, and financial counseling to its participants and encourages them to graduate from high school and continue on to the postsecondary school of their choice. Both programs provide for career counseling and mentoring of students.

- **The Personal Responsibility and Work Opportunities Act of 1996**

This Act changed the nation's welfare law to create a new system of block grants to states for Temporary Assistance for Needy Families (TANF) and to focus on moving people from welfare to work (WTW) as one of the primary goals of federal welfare policy. Funds may be used to help eligible individuals enter employment through job creation through public or private sector wage subsidies; on-the-job training; contracts with public or private providers of job readiness; job placement; post-employment services; and community service or work experience. Funds are targeted to individuals who face two of three specified labor market deficiencies (such as lack of high school diploma or GED, low reading and math skills, or poor work history) and who are long-term welfare recipients. Individuals are assessed to determine their educational level and work needs and then provided with counseling on their options. Many young adults receive career-oriented training as well as assistance with basic skills.

- **YouthBuild**

YouthBuild offers job training, education, counseling, and leadership development opportunities to unemployed and out-of-school young adults, ages 16–24, through the construction and rehabilitation of affordable housing in their communities. YouthBuild's academic program is designed to prepare students for the high school equivalency exam, a high school diploma, postsecondary technical training, or college. The curriculum integrates academic skills of reading, writing, and mathematics with life skills, leadership opportunities, and vocational training. The classes are small, allowing instructors to provide one-on-one attention and enabling the students to feel respected and supported. A nurturing "family-like" environment encourages students to solve problems together and see their strength in cooperation. At the worksite, young people receive close supervision and training in construction skills from qualified instructors. Each program has a mix of funding, including federal funds from the Department of Housing and Urban Development and occasionally from Americorps, as well as state, local, and private support.

- **Youth Service and Conservation Corps**

Conservation and service corps programs (youth corps) harness the energy and idealism of young people to meet the needs of communities, states, and the nation. Corps programs engage young people, generally 16–25 years old, in paid, productive, full-time work which benefits both the young people and their communities. Youth work in crews or teams with a paid adult supervisor who sets and models clear standards of behavior. Corps programs offer pre-GED, GED and college credit courses. Funding for corps programs come from a variety of sources including state, county and municipal appropriations, fee-for-service contracts, foundations and corporations, as well as from federal funds under the National and Community Service Trust Act.

- **The National Skill Standards Board (NSSB)**

The NSSB was created to help spur the process of developing and implementing industry-based skill standards. The Board provides funds to partnerships of employers and educators to develop standards, assessments, and certification in 15 industry sectors. Several industry partnerships have been formed and are in the process of creating standards, assessments, and certifications, and in developing support for the standards among the industry members.

- **Individuals with Disabilities Education Act (IDEA)**

This Act provides assistance to local school districts to help meet the costs of providing special education and related services to

children with disabilities. Funds can be used for salaries of teachers and other personnel, education materials, and related services such as special transportation or occupational therapy that allow children with disabilities to access education services. An Individualized Education Program (IEP) is developed for each student that identifies his or her educational goals, how those goals will be met, and describes how services are more closely tied to the general curriculum. Recent changes to IDEA include a greater focus on how students with disabilities will make the transition from school to employment. IDEA funds can be used to support work-based learning experiences for students as well as to support employers who provide disabled students with employment opportunities.

- **Rehabilitation Act of 1973**

The Rehabilitation Act of 1973, as amended in 1998, provides funds for the administration and operation of a vocational rehabilitation (VR) program to assist individuals with disabilities in preparing for and engaging in gainful employment. The VR program provides a wide range of services and job training to people with disabilities. Some of the services provide personal and assistive technology intervention for students with a physical or mental disability. State VR agencies must provide comprehensive rehabilitation services that far exceed those found in routine job training programs. This frequently includes work evaluation and adjustment services; assessment for and provision of assistive technology, such as customized computer interfaces for persons with physical and sensory disabilities; job counseling services; and medical and therapeutic services. State VR agencies assist persons with disabilities in locating employment by developing close relationships with local businesses, and they base their training on industry standards. The law also provides funds for supported employment, a work-based learning experience in which individuals with disabilities are paired up with an industry mentor. In addition, Section 504 of the Rehabilitation Act of 1973 enables students with disabilities who do not receive special education services to benefit from transition services and reasonable accommodations, such as interpreters, assistive devices, and transportation.

Conclusions

Based on this cursory analysis, it is clear that while there are many similarities between these federal laws and programs and STW, ***these laws are not able to sustain and support STW in a comprehensive and systemic manner.*** Of all the programs, the Perkins Act provides the most meaningful support and closest match, but the Perkins Act has limitations in terms of serving all students, its connections to and support of employers and intermediaries, and broad support of work-based learning for students.

The WIA programs for youth are strongest in the area of connecting youth with caring adults or mentors; but there is very little focus on the required high level academics or of linking academic learning with work-based learning. No program provides overt support for incorporating industry skill standards into curriculum, although the National Skill Standards Board can support this activity as the industry partnerships develop. The Perkins Act could also be used to support such projects. Perkins and WIA could conceivably be used to help support intermediary organizations, but current practices would have to change at the state and local levels to accommodate that focus.

Another difficulty is that both WIA and the Perkins Act include specific legislative language prohibiting the use of WIA or Perkins funds to carry out any activities that are funded under the School-to-Work Opportunities Act. Both laws, however, would allow funds to support STW activities only for individuals who were already eligible under either Perkins or WIA. In other words, Perkins and WIA funds can be

used to support STW activities, but only for the populations they would normally serve, which limits the reach of STW activities.

Perhaps the most difficult challenge is the historical focus of federal education and training laws on certain categories of individuals. The primary purpose of these laws has always been to provide *services to groups* of needy children and communities. In contrast, the philosophy of the STWOA is to build a *system* for *all* students (needy or not). This makes the issue of finding replacement funds for this broader mission much more challenging.

Fortunately, there are examples of communities that have found ways to use existing resources to develop comprehensive career preparation programs. Two models are discussed below.

- **High Schools That Work**

The High Schools That Work (HSTW) initiative, developed by the Southern Regional Education Board (SREB), provides a model for career preparation for secondary schools, using existing resources. HSTW is designed to replace outdated vocational technical education with a program that consists of rigorous academics taught in applied, contextual courses and focused on a career theme. HSTW uses current school funding and focuses on changing current practice.

HSTW has two major goals: (1) to raise the math, science, communication, problem-solving, and technical achievement of more students to the national average and above; and (2) to blend the essential content of traditional college-prep students—math, science, and language arts—with quality vocational-technical studies by using applied and integrated curricula.

HSTW meets a number of the STW Principles, including: promoting high academic standards, expanding opportunities for students and exposing them to a broad array of career opportunities, using contextual learning, creating small learning communities, linking classroom and work-based learning, and connecting students with adults and mentors.

HSTW programs use state and local per-capita education funds, normally allotted to public high schools, as well as Perkins Act dollars. The HSTW philosophy is to change the way current resources are used, rather than focus on the search for one-time money for the creation of a new program.

- **Career Academies and the Federal Partnership in Support of Career Academies**

While career academies differ widely, they have three common criteria that bind them:

—A small learning community, comprised of a group of students within the larger high school, who take classes together for at least two years, taught by a team of teachers from different disciplines;

—A college preparatory curriculum with a career theme, enabling students to see relationships among academic subjects and their application to a broad field of work; and

—Partnerships with employers, the community, and local colleges, bringing resources from outside the high school to improve student motivation and achievement.

Career academies were initially started as a means to provide smaller, more individualized learning communities with a strong focus on high academic achievement, a clear career focus, and opportunities for involvement of business and industry in the school. Career academies support numerous STW Principles, including: promoting high academic standards, expanding opportunities for students and exposing them to a broad array of career opportunities, using contextual learning, creating small learning communities, linking classroom and work-based learning, and connecting students with adults and mentors.

Most career academies are funded with existing state and local per-capita dollars. In addition to this general funding, many career academies have been very successful in obtaining funding from their private sector partners in a variety of ways. Businesses and employers involved with career academies provide support and in-kind contributions of materials, space, staff, subject matter expertise, workplace experiences, and leadership. A number of career academies have corporate sponsorship boards or hold fundraisers with their corporate partners to raise funds. In one urban school district, career academies have existed for over 28 years, with funding only from the per-capita education expenditure and private funds. They also never received any funds from STWOA.

Some career academies have set up 501(c)(3) organizations in their school district to serve as a business intermediary, to help raise funds, to apply for grants, and to help provide support for the program. Several career academies funnel donations from their large private sector partners through these organizations to help provide paid internships for students at small firms that cannot afford to pay these expenses.

In an effort to expand and promote career academies, the Career Academy Support Network, the National Academy Foundation, the National Career Academy Coalition, the Center for Research on the Education of Students Placed At-Risk, and the Southern Regional Education Board have formed a network. This group will form partnerships with at least ten federal agencies, including the Departments of Education, Justice, Treasury, and Health and Human Services, in order to expand the number of career academies. Other organizations that currently support career academies include the American Society for Public Administration and the Law, Criminal Justice and Security Network (LAWNET).

Plotting Comparisons

States and communities have a great deal of flexibility in how they use their education and training dollars. Thus, building and sustaining programs based on STW with other resources is entirely feasible. What is required is strong, consistent leadership and community vision to change the way current programs operate and current funds are used.

The attached chart shows in graphic form how the federal programs reviewed support the STW Principles. In reviewing the attached chart, a number of observations come immediately to mind.

First, the unique provisions of STWOA, which provide for support of intermediaries, employers, and use of work-based learning, are not contained in other federal legislation, and there will be a large gap in these activities when the law expires. While laws like Perkins or WIA could be amended to support intermediaries or increase the amount of work-based learning used, it is very unlikely to occur prior to the expiration of STWOA. However, it is possible to look at the WIA youth councils and the Tech Prep consortia as vehicles for promoting business involvement in career preparation programs and increasing opportunities for work-based learning.

Second, very few programs have a focus on industry skill standards and linking them to curriculum and academic standards. The National Skill Standards Board has launched a limited number of partnerships, but standards are not expected to be available from more than two of these partnerships in 2000, and they have not yet entered the curriculum development phase which would link standards to coursework. The NSSB also faces the end of its authorization period, although Congress could extend its work. This is another area in need of support and leadership.

Third, it is also clear that few programs link the secondary and the postsecondary school

RELATIONSHIP OF ESSENTIAL STW PRINCIPLES TO OTHER FEDERAL LEGISLATION AND PROGRAMS

Essential Principles		WIA	Jobs Corps	Youth Opp. Grants	Perkins	Tech Prep	Goals 2000	CSRD Obey-Porter
Principle 1:	Promotes high standards of academic learning and performance for ALL young people						■	●
Principle 2:	Incorporates industry-valued standards that help inform curricula and lead to respected and portable credentials	●	●	●	●	●		
Principle 3:	Provides opportunities for contextual learning	■	●	●	■	■	●	●
Principle 4:	Helps to create smaller, more effective learning communities	●	■	●	●	■		●
Principle 5:	Expands opportunities for all young people and exposes them to a broad array of career opportunities	●	●	●	■	■		●
Principle 6:	Provides program continuity between K–12 and postsecondary education and training				●	■		
Principle 7:	Provides work-based learning that is directly tied to classroom learning	●	●	●	●	●		
Principle 8:	Assists employers in providing high quality work-based learning opportunities							
Principle 9:	Connects young people with supportive adults, mentors and other role models	■	■	■	●	●		●
Principle 10:	Promotes the role of brokering/ intermediary organizations	●			●	●		

Key

■ = A strong focus of the law/program is encouraged and occurs with frequency
● = An allowable activity under the law/program, but is not a strong focus

ESEA Title I	ESEA Title II	ESEA Title III	ESEA Title VI	GEAR UP	TRIO	Welfare to Work	Youth Build	Youth Corps	NSSB	IDEA	Voc. Rehab.	HSTW	Career Acad.
									●				
							●	●	■		●	●	●
●			●			●	■	■		■		■	■
●			●				■	■		■	■	■	■
				■	■	●	●	●				■	■
				■	■					■		●	●
							■	■		■	●	●	■
							●	●		●	●		●
●				■	■	●	■	■		●	■	■	■
						●	●	●	●		●		●

experience in a meaningful way, yet this is a critical aspect of STW and career preparation programs. While Tech Prep provides the greatest support for articulating programs between high schools and two-year colleges, Tech Prep currently does not reach large numbers of students in strongly articulated programs. This is an area that needs additional focus and support.

Finally, one issue that is not related to federal program support but is vitally important is *the need for national leadership*. STWOA and the National School-to-Work Office have provided this vital leadership to the field during their brief existence. However, once the legislation expires, this leadership will disappear and the focus on the unique aspects of STWOA will be lost. A remaining question is, "To what extent can existing programs promote the STW vision?" An alternative question is, "Do we need an entirely new entity (publicly- or privately-funded) to provide national leadership and continue this important work?"

V. IMPLEMENTING STRATEGIES FOR LEADERSHIP, POLICY, PRACTICE AND DISSEMINATION

As an old Talmudic saying goes, "it is not incumbent upon you to finish the work, but neither are you free to desist from it."

Supporting the STW Principles represents a vigorous agenda that must involve many organizations and individuals throughout the nation. The federal government's venture capital approach has proven meritorious in many ways by showing the value of seeding change. Yet, much work remains. What follows are specific recommendations to continue the work, including suggestions about "who" should take the critical leadership roles to ensure continued progress. We identify five broad categories of partners throughout the recommendations.

- **Local Institutions**: schools, school districts, postsecondary institutions, community organizations, workforce investment boards and youth councils.
- **States**: Governors, legislatures, state boards of education for both K–12 and postsecondary and workforce development agencies.
- **Federal Government**: the Department of Education, the Department of Labor and the National Skill Standards Board.
- **National and Regional Organizations**: various education and training membership, quasi-governmental, research and policy support groups.
- **Employer Associations**: such as the U.S. Chamber of Commerce, National Association of Manufacturers, National Retail Association and their state and local networks.

The Ten STW Principles are interdependent and overlapping; success cannot be achieved by supporting only one or two. The five groups of individuals and organizations that need to provide leadership and support to STW will, at times, be dependent on the actions of the others. Developing a coalition of leaders will be an important step to continue the progress of STW. While not specifically listed, funding organizations, including community foundations, will play a critical role in helping to achieve the promise of the STW Principles. By identifying specific organizations in some of the recommendations, we hope that both the organization and funders will help take the next steps to continue promoting the Ten STW Principles.

Local

Local institutions, most specifically, public schools, have the power and flexibility to design educational programs that include the STW Principles. Schools and other community partners should incorporate the STW Principles into their policies and practices and can:

- Ensure that all professional and leadership development efforts emphasize the research, theory, and practice embedded in the STW Principles.[11]
- Promote "how-to" tools on effective contextual learning experiences in the classroom and in community and work-based learning environments.
- Provide curricula, instructional materials, career guidance information, and assessment instruments that use contextualized teaching and learning to promote acquisition of the knowledge, skills and abilities needed for economic self-sufficiency.
- Provide choices for students through charter schools, career academies, schools within schools, and other small learning environments.
- Eliminate regulatory impediments (e.g., mandated class or "seat time" and inflexible schedules).
- Track student outcomes based on the STW Principles and report them to the public via "report cards" and other forms of school evaluation.
- Promote career information services and progressive career exposure for all students through community partnerships, Workforce Investment Boards (WIB) and Youth Councils.
- Develop local partnerships with employer networks to expand meaningful work-based learning opportunities for all youth and to provide externships for all teachers and counselors.
- Ensure that a community-wide strategy exists for mentorship services for both in-school and out-of-school youth.

[11] The need for high-quality sustained, and continuous staff development opportunities is considered the highest priority to ensure sustainability and expansion by all who participated in this review.

States

States must provide assistance to local communities to support the change process and to adopt School-to-Work Principles. States are in the position to provide the primary legislative and regulatory framework as well as fiscal resources to support STW programs. State agencies, working together, must take the lead to:

- Integrate the STW Principles into existing policies and programs across education and workforce development programs and, in particular, with state academic standards.
- Incorporate the STW Principles into state accountability systems, including report cards for schools and districts.
- Develop contextualized curricula aligned with academic and occupational standards bridging secondary and postsecondary learning.
- Support aggressive information collection, evaluation and dissemination functions to ensure that "best practice" materials are collected and shared with all appropriate stakeholder institutions (e.g., local schools, postsecondary institutions, training providers, and local education and workforce development boards). The use of the best practice materials should be geared to supporting staff development and production of tools for use in the classrooms based on academic and occupational standards.
- Provide resources and legislative and regulatory flexibility to promote small learning communities and expansion of choice via career-focused charter schools and academies. Allow legislative and regulatory flexibility to expand work-based learning opportunities.
- Develop performance assessments that recognize the value not only of rigorous academic skills and knowledge, but also of occupational and workplace skills and knowledge.
- Provide support (fiscal, if necessary) to employer-led organizations to help expand work-based learning opportunities for students and teachers. Ensure that adequate support is given to small- and medium-sized firms to participate in high quality work-based learning experiences. Provide resources to employer associations to assist employers on how to develop and deliver sound work-based learning opportunities.
- Expand co-op education programs to encompass a wide range of career/industry areas.
- Develop articulation guidelines for accepting work-based experiences and performance-based assessments in college admission policies. Establish common guidelines and incentives on how to recognize work-based learning for credit at secondary and post-secondary institutions.
- Use common career clusters to organize all occupational preparation programs and report results to the general public in a common format via One-Stop Career Centers.
- Promote expansion of intermediaries within the state.
- Establish policies and incentives that promote use of mentors in local programs including support for training of mentors.
- Work with the National Skill Standards Board to integrate academic standards and assessments with occupational standards at appropriate grade levels.

The Federal Government

The "sunsetting" of the STWOA does not eliminate the need for federal leadership and follow-through to incorporate the lessons derived from this legislation to improve schooling. To the contrary, the federal government can carry out a number of essential actions to realize the return on the public investment, and more importantly, to improve public education for our youth and prepare them for work and life.

The U.S. Department of Education

The Department should advocate the inclusion of successful STW strategies in its school reform initiatives. Specifically, opportunities exist to:

- Establish a "lead office," preferably in the Office of the Secretary, to actively pursue the integration and promotion of the STW Principles throughout federally-supported education programs.[12]
- Urge the incorporation of STW research into new education initiatives, such as Comprehensive School Reform Demonstrations (Obey-Porter) and small schools.
- Increase funds and focus them on needy secondary schools as part of the reauthorization of the Elementary and Secondary Education Act (ESEA).
- Promote the STW Principles in all of the professional development work supported by the Department.
- Rigorously evaluate the impact of STW strategies on student academic learning and performance and determine the impact of work experiences on academic skill attainment. Support research, evaluation, and data collection work through the Office of Education Research and Information (OERI) to track results of STW.
- Incorporate the STW Principles into the New American High Schools initiative of the Office of Vocational and Adult Education (OVAE) and expand the sponsorship and resources for that initiative to include support from the Office of Elementary and Secondary Education.
- Promote the improvement of connections between the K–12 and postsecondary systems in the use of contextualized learning based on integrated academic and occupational standards through research and demonstrations supported by the Fund for the Improvement of Postsecondary Education and the Office of Postsecondary Education.
- Provide funds and support to the field for career guidance and counseling.
- Support a clearinghouse and other forms of dissemination of best practice materials on integration of academic and occupational curricula and standards that span secondary and postsecondary education.
- Promote the expansion of co-op education and by revising the appropriate sections of the Higher Education Act to provide incentives for such growth.

[12] The Office of the Secretary is recommended as the most effective place to assure transition and attention after the sunset of STWOA due to the crosscutting nature of the Principles and the emphasis on systemic reform.

The U.S. Department of Labor

- The Youth Office[13] of the Employment and Training Administration should take the lead to coordinate with other agencies, such as Housing and Urban Development's YouthBuild program, in the development of government-wide technical assistance materials that document "best practices" of work-based learning.

- Provide funds or technical assistance for the development of curricular materials to support quality work-based learning services for youth.

- Support the development and expansion of national and state networks of intermediaries that are linked to employer associations.

- Provide guidance, support, and technical assistance to Workforce Investment Boards so that their Youth Councils consider the STW Principles in developing community-wide youth strategies.

- Ensure that community One-Stop Career Centers provide information and guidance to youth on career opportunities and STW career preparation programs available in the community.

National Skill Standards Board (NSSB)

NSSB is the federally designated entity responsible for the development of a national, voluntary skill standards system. For the Board to be successful in its mission, it must carry out several roles including: (a) establishment of a framework and promotion of the development of standards through industry-led Voluntary Partnerships; (b) endorsement of standards; and, for our purposes and most importantly, (c) serve as facilitator/broker/partner with federal agencies and the States to help ensure implementation of a voluntary national system. In collaboration with the U.S. Departments of Education and Labor and in concert with the Voluntary Partnerships, NSSB should:

- Work with national education organizations with expertise in academic standards and employer associations with state and local networks (e.g., chambers, manufacturing, retail) to promote and link state academic standards to occupational skill standards.

- Provide information on career opportunities in the Voluntary Partnerships through One-Stop Career Centers and other workforce development organizations.

- Assist the education and training provider networks to develop competency-based recognition strategies for use by education and employers alike.

- Work with national organizations that have expertise and interest in expanding co-op education programs to incorporate skill standards in both the classroom and work-place materials.

[13] Under the recent reorganization of the Employment and Training Administration, there is now a lead office for all programs serving youth. Unless otherwise noted, the recommendations related to the Department of Labor assume the Youth Office will be the point of contact.

National Organizations

- Key education membership organizations, such as the American Federation of Teachers, American Association of School Administrators, Council of Chief State School Officers, National Association of Secondary School Principals, National Education Association, and education improvement networks, such as the Coalition of Essential Schools, High Schools that Work and National Tech Prep Network, should assess what actions can be taken within their own memberships and networks to incorporate the STW Principles.

- Organizations, such as the National Association of Secondary School Principals, should form alliances with employer organizations and NSSB-recognized Voluntary Partnerships to promote continuation and expansion of successful efforts to integrate curricula and standards.

- Education policy/public interest groups should promote the development and replication of research-based educational reform models that incorporate successful school-to-work strategies.

- National organizations, such as the American Association of Community Colleges, State Higher Education Executive Officers, Council of Chief State School Officers, National Association of State Directors of Vocational Technical Education, should promote the development of curricula and coherent sequences of courses aligned with academic and occupational standards that bridge secondary and postsecondary learning.

- State Higher Education Executive Officers, other key national higher education organizations, and state accrediting bodies should continue to research and develop college admission policies that acknowledge contextual learning instructional strategies, work-based learning experiences and performance-based assessments.

- National organizations should help support existing STW intermediary organizations and develop new alliances between education and employers at the national, state and local levels to carry out the intermediary role.

- Organizations, such as the American Association of School Administrators, National Association of Secondary School Principals, Council of Chief State School Officers, and American Association of Community Colleges, should assess the role of work-based learning in school improvement efforts.

- National organizations should advocate new ways of governance that allow for the development of public–private partnerships and cut across funding streams.

Employer Associations

Much remains to be done to develop the solid connections between learning that occurs outside of the traditional classroom and the workplace. The growing recognition of the value of work as a developmental tool is only beginning to take root in the United States. One of the central lessons that emerged from the STWOA experience comes from the employer community. A steadily increasing number of employers have found value providing work-based learning opportunities for teachers and students alike. But many employers also have found they need assistance to make such experiences high quality. They are most comfortable seeking that assistance and information from organizations that understand the needs of business—employer associations.

National employer associations (with fiscal support from the Department of Labor[14]) should organize and support state and local networks to promote standards, curricula development and other tools relevant to improving contextualized learning in all forms of education and training institutions. Employer associations should:

- Develop a network of national, state and local employer/intermediary organizations to promote STW programs and strategies.
- Promote best practices concerning employer involvement in STW including work-based learning, curriculum development, contextual learning, and mentoring services.
- Develop and offer opportunities for secondary and postsecondary education faculty to experience the workplace through internships.
- Establish new collaborations between employer associations and secondary and postsecondary institutions to promote work-based learning that moves from career exposure in the early stages to formal recognition of educational credit for knowledge gained in the workplace.
- Provide support (in-kind, technical assistance or funding) to members who participate in business-education partnerships or brokering or intermediary organizations.

[14] The Department of Labor is recommended as the appropriate funding source due to its responsibility to oversee the development of regional skill consortia and its responsibilities under WIA.

VI. A SUMMARY RECOMMENDATION FOR SUSTAINABILITY: CREATING A SCHOOL-TO-WORK COLLABORATIVE

Systematic change to improve the transition from the school to the workplace requires a wide array of institutions and organizations all over the country to make the envisioned changes become reality. In our specialized world of separate governance structures and traditional national membership organizations, no one system (e.g., public or private, traditional education or workforce training) can claim the concepts embedded within the STWOA as "their territory." The same observation is applicable regarding priorities of national organizations. In this case however, successful implementation of the Ten Principles is dependent upon cutting across real, as well as perceived, boundaries and barriers.

The STW discussion group has struggled with how to help ensure that some form of national leadership structure be put in place after the STWOA expires and the National STW Office is dismantled. No simple answer exists to the leadership question because leaders and resources are located across the system. Thus, the obvious solution is to build a new collaborative or coalition centered on helping all stakeholders at all levels infuse the Essential Principles into the necessary "nooks and crannies" of the U.S education and training systems for youth.

For now, we propose the creation of a new organization—"The STW Collaborative." Its purpose will be to conduct research, provide documentation, and disseminate information on what works. It should serve as a "brokering house" where organizations that may not normally develop working partnerships can do so. It might even be possible that the Collaborative could become the home of the rich materials that have been garnered by the Learning Center of the National School-to-Work Office and continue to grow the necessary information base. The Collaborative could take on such tasks as conducting public opinion polls and launching campaigns to improve the public image of applied learning and technical education. The members of the Collaborative would collectively establish the priorities and help identify the lead organizations to undertake the common agenda work.

This proposed STW Collaborative will need resources from foundations, national organizations and the government. Many, if not all, of the groups involved in the development of this document look beyond the year 2001 and can easily become the foundation of this new Collaborative to continue to promote the ten Principles. The Collaborative is the natural outgrowth of the partnership efforts that are underway and ensures that the federal government investment continues to grow. As this paper was designed to continue the conversation about STW, the Collaborative can support federal, national, state, and local governments and organizations as they seek ways to continue this essential work.

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